St. Louis Area Earthquake Hazards Mapping Project Meetings – Decisions & Actions DRAFT

Wednesday, February 2 & Friday, February 4, 2005 St. Louis, Mo.

In Attendance at meetings on February 2 and/or February 4, 2005

Bob Bauer; ISGS, Champaign

Bob Berri; St. Louis

Brian Blake; CUSEC, Memphis Chris Cramer; USGS, Memphis David Crossley; SLU, St. Louis

Joachim Dorsch; StL Comm College; St. Louis Sue Evers; FEMA Region VII, Kansas City Tom Fennessey; MoDOT, Jefferson City

Carol Finn; USGS-MCMC, Rolla Mimi Garstang; MGS, Rolla Joan Gomberg; USGS, Memphis Susan Green; MSSC, Jefferson City Greg Hempen; USACE, St. Louis Bob Hermann; SLU, St. Louis

Norm Hester; CUSEC-SG, Bloomington, Ind.

Dave Hoffman; UMR, Rolla Kevin James; UMR & MGS, Rolla

John Kiefer; Kentucky Geologic Survey, Lexington

Martha Kopper; EWGCC, St. Louis Rick Kottemann; Laclede Gas, St. Louis Gary Krizanich; USGS-MCMC, Rolla Kevin McLain; MoDOT, Jefferson City Tom Mesko; UMR & MGS, Rolla

Jim Palmer; MGS, Rolla
Dave Rogers; UMR, Rolla
Buddy Schweig: USGS, Ma

Buddy Schweig; USGS, Memphis

Phyllis Steckel; for USGS, Washington, Mo.

Susie Stonner; SEMA, Jefferson City

Steve Sturgess; MGS, Rolla Rita Swearingen; ICC, St. Charles Pete Telthorst; FM Global, St. Louis Patrick Walsh; IPSI, St. Louis Gayla Weber; SEMA, Jefferson City

Jerry Wessel; MABOI & City of StL Bldg Dept

Jim Wilkinson; CUSEC, Memphis Dave Williams; KGS, Henderson

Decisions & Actions

- <u>Decision</u>: The St. Louis Area Earthquake Hazards Mapping Project (SLAEHMP) will proceed by addressing data needs on three levels of detail the "three-pronged approach."
- <u>Decision</u>: Project efforts will give high priority to *four focus quadrangles*, which include: 1) significant areas of existing, new, and proposed equity and developed assets and 2) a varied, yet representative, sample of several different geologic settings within the overall St. Louis metro area.
- Decision: The four focus quadrangles are

Wentzville, Mo.;

Columbia Bottom, Ill. & Mo.;

Granite City, Ill. & Mo.; and

Monks Mound, Ill.

- <u>Decision</u>: Project efforts will include collecting new field data for the four focus quadrangles. New data to be collected may include shear wave testing, drilling, mapping or more detailed mapping, and other field surveys that will result in more detailed information to be available for these four focus quadrangles than for the other 25 quadrangles within the original, 29-quadrangle project area.
- <u>Decision</u>: Project efforts will include accepting new and existing data within the *original*, 29-quadrangle project area. These include the following topographic quadrangle maps.

Grafton, Ill. & Mo.

Elsah, Ill. & Mo. Alton, Ill. & Mo. Bethalto, Ill. Wentzville, Mo. O'Fallon, Mo. Kampville, Mo. St. Charles, Mo.

Florissant, Mo.

Columbia Bottom, Ill. & Mo. Wood River, Ill. & Mo. Edwardsville, Ill.

Weldon Spring, Mo. Chesterfield, Mo. Creve Coeur, Mo. Clayton, Mo.

Granite City, Ill. & Mo. Monks Mound, Ill. Collinsville, Ill. Manchester, Mo. Kirkwood, Mo.

Webster Groves, Mo. & Ill.

Cahokia, Ill. & Mo. French Village, Ill. O'Fallon, Ill. House Springs, Mo. Maxville, Mo. Oakville. Mo. & Ill. Columbia, Ill.

• <u>Decision</u>: Project efforts will include accepting existing data and information that may be relevant to this project and that are located within *the St. Louis metropolitan region*. For this project, the St. Louis metropolitan region includes the following five counties.

St. Charles County, Mo. St. Louis County, Mo. Jefferson County, Mo.

Madison County, Ill. St. Clair County, Ill

- Action: Bob Bauer and Jim Palmer will send informational letters of agreement to AmerenUE, Laclede Gas, St. Louis Metropolitan Sewer District (MSD), MoDOT, IDOT, Metro (St. Louis rapid transit system), water districts, consulting firms, and any other individual or organization that may have data or information relevant to this project. This will document and clarify the agreements between the project and those organizations in the event of any change in personnel. Deadline: end of February 2005; report to Buddy Schweig.
- <u>Action</u>: **Dave Rogers** will verify that the COSMOS format is ready to start accepting data (that all fields have been defined and the architecture is ready to accept data). Deadline: end of February 2005; report to **Buddy Schweig**.
- Action: Buddy Schweig will develop a project timeline that includes milestones for entering existing data and new data to be collected in the spring of 2005, a milestone of the completion of the COSMOS database preparation, and a decision-point milestone to decide if UMR will serve as a COSMOS portal. (The USGS Mid-Continent Mapping Center (MCMC) in Rolla has Arc-IMS and could serve as a "back-up portal" for UMR.) The data entry will result in a preliminary database and maps available by the fall of 2005 (preferably) or the end of 2005. The timeline will also include a milestone of May 1, 2005, which is when Dave Rogers should find out if his affiliation with UMR will continue past May 2006. Deadline for timeline: end of February 2005, which includes a report to the Data Committee* and the COSMOS & Data Management Committee*.
- <u>Action</u>: **Norm Hester** will meet with John Hill and get an update on the status of Indiana Geological Survey's role in the Evansville Area Earthquake Hazards Mapping Project.

Following are notes from Joan Gomberg from the February 4, 2005 meeting on the COSMOS Database. Attendees: *Bob Bauer, Chris Cramer, Joan Gomberg, Norm Hester, Dave Hoffman, John Kiefer, Jim Palmer, Dave Rogers, Buddy Schweig, Phyllis Steckel, Jim Wilkinson, Dave Williams.*

The purpose of the meeting was to bring all groups involved to an understanding of what would be required to build a COSMOS-style database for use in archiving and dissemination subsurface data being collected in support of urban seismic hazard mapping projects underway in the Central US. This was achieved and all groups agreed to participate in this effort; these included the USGS, Dave Rogers from the University of Missouri at Rolla, and the State Geological Surveys of IL, MO, KY, and IN (John Hill was not present, but Norm Hester spoke on his behalf). Current NEHRP projects to collect and archive shear-wave and geotechnical data being conducted by CUSEC and Jim Palmer also stated their commitments to this effort as part of these projects.

COSMOS is a database developed to store and distribute subsurface geological, geophysical, and geotechnical data. Presently the COSMOS database system is being used by the strong motion community and a large consortium in California as well, including the development of a 'portal'. The Federal Highway Dept. is planning to adopt it as well. This system is essentially a 'distributed' database in which member groups store their subsurface data in a specified COSMOS format. A 'portal' is established on one server, which runs software that displays the holdings of all member groups to users and retrieves requested data from whatever member's computer it resides on. In theory, if data are stored in COSMOS format on a group's computer, any COSMOS portal may access it if that group makes them available to that portal. To employ this in the Central US for the urban hazard mapping efforts, the State Surveys involved would store their subsurface data in the specified COSMOS format. During the first year (target start date, May 1, 2005) Dave Rogers would work with member groups (listed above) to show them how their data must be formatted and stored. All groups have agreed to work with him on this, using available resources. A portal would be established during the second year, with provisions made during the first year for use of alternative portals (e.g. SCEC's) in the event that the second year's work was not possible.

Joan Gomberg United States Geological Survey 3876 Central Ave Ste 2 Memphis TN 38152-3050 901-678-4858 901-678-4897 (FAX)